

REMARKS/ARGUMENTS

This case has been carefully reviewed and analyzed in view of the Official Action dated 29 December 2004. Responsive to the rejections made in the Official Action, Claims 1, 8 and 9 have been amended to clarify the combination of elements which form the invention of the subject Patent Application. Additionally, Claims 2 – 7 and 10 – 12 have been cancelled by this Amendment.

In the Official Action, the Examiner rejected Claim 1 under 35 U.S.C. § 102(b) as being clearly anticipated by any of Holman, U.S. Patent No. 4,255,477, Lambuth, U.S. Patent No. 4,413,459, or Clarke et al., U.S. Patent No. 5,525,394. The Examiner further rejected Claims 1 – 4 under 35 U.S.C. § 102(b), as being anticipated by Weyerhaeuser, U.S. Patent No. 2,354,725. claims 1, 3 and 5, were rejected under 35 U.S.C. 102(b), as being anticipated by Bryant, U.S. Patent No. 3,234,074. Still further, the Examiner rejected Claims 2, 4 and 6 – 12 under 35 U.S.C. 103(a) as being unpatentable over Bryant in view of Weyerhaeuser.

Before discussing the prior art relied upon, it is believed beneficial to first briefly review the structure of the invention of the subject Patent Application, as now claimed. The invention of the subject Patent Application is directed to a composite board which includes a first board having a first grain and a second board having a second grain. The composite board includes a mediate board securely sandwiched between the first board and the second board. The mediate

board has a grain which is perpendicular to the first grain and the second grain such that deformation of the composite board is avoided by interaction between the first grain, the second grain and the grain of the mediate board to harmonize expansion or contraction of the first board and the second board. The mediate board has a notch formed in an edge face of the mediate board and a tongue formed on an opposing edge face to enable the composite board to connect to an adjacent composite board. The mediate board has (a) a plurality of slits formed latitudinal across at least one side face thereof in longitudinally spaced relationship, and (b) a plurality of longitudinal slits formed longitudinally in the mediate board in spaced latitudinal relationship to intersect the plurality of latitudinal slits on the at least one side face to reinforce structural integrity of the composite board and overcome stress resulting from temperature and humidity change inside the composite board. The embodiment defined by Claim 8 differs from that discussed above in that the mediate board has (a) a plurality of slits formed latitudinally across at least one side face thereof in longitudinally spaced relationship and (b) a plurality of spaced inclined slits are formed in the at least one side face and respectively intersect each one of the plurality of latitudinal slits on the at least one side face. With respect to Claim 9, such is defined by a pair of boards on each side of the mediate board, and the mediate board having (a) a notch formed in an edge face of the mediate board, (b) a tongue formed on an opposing edge face, (c) a plurality of latitudinally directed and longitudinally spaced top

slits formed in a top face of the mediate board, (d) a plurality of latitudinally directed and longitudinally spaced bottom slits formed in a bottom face of the mediate board, (e) a plurality of left slanted slits formed in the top face of the mediate board and intersecting the plurality of top slits, and (f) a plurality of right slanted slits formed in the bottom face of the mediate board and intersecting the plurality of bottom slits.

In contradistinction, the Holman reference is directed to an artificial lumber board formed by a plurality of elongated wood strips. The board is formed by the combination of an outer layer 16 having wood strips 16a arranged in longitudinal alignment along one dimension of the panel, an outer layer 18 including strips 18a in longitudinal alignment extending in the same direction as strip 16a, and a core layer 20 having strips 20a longitudinally aligned but extending in alignment in a direction transverse to the strips 16a and 16b. While the aligned strips may be somewhat akin to the grain of a natural board, the reference fails to disclose or suggest forming any slits in the core layer 20. Therefore, as the reference fails to disclose each and every one of the elements of the invention of the subject Patent Application, as now claimed, it cannot anticipate that invention.

It is respectfully submitted that the Lambuth reference is directed to a laminated wooden structural assembly. The disclosed assembly includes a web member 12 formed by a pair of spaced outer layers 18 and 20 which are bonded to an inner core layer 22. The core layer 22 has a grain direction d_i which is

perpendicular to the grain directions d_0 of the outer layers 18 and 20. However, like Holman the reference fails to disclose or suggest any slits formed in the side faces of the core layer. Therefore, as the reference fails to disclose each and every one of the elements of the invention of the subject Patent Application, it cannot anticipate that invention.

The Clarke et al. reference is directed to an oriented strand board-fiberboard composite structure. The composite structure 100 includes a bottom flake layer 101, a middle flake layer 105, a top flake layer 107, and a dry process fiberboard overlay layer 111. In Fig. 1a, the direction of the flakes of the flake layer 105 appears to be perpendicular to the flake direction of the adjacent layers 101 and 107. However, nowhere does the reference disclose or suggest the formation of slits in any of the layers, as now claimed. Thus, as the reference fails to disclose each and every one of the elements of the invention of the subject Patent Application, it cannot anticipate that invention.

It is respectfully submitted that the Weyerhaeuser reference is directed to a composite lumber product having a core 10, 65 sandwiched between the layers 14, 74 and 15, 69. The core 10, 65 has a plurality uniformly spaced and extended kerfs 11, 12, 68 formed therein. Although the reference discloses numerous variations in the depth and spacing of the kerfs, contrary to the Examiner's assertion, the reference fails to disclose or suggest a structure where intersecting kerfs are utilized to reinforce the structural integrity of the composite board. In

fact, the reference teaches away from such structure in that it is designed to "... weaken a board so that the strength lengthwise of the grain is retained, and the full continuity of the cross grain (and hence some of the strength across the grain) is lost. Thus a board becomes flexible under a force which would not flex the unkerfed board ...", page 1, column 2, lines 36 – 41. As the referenced method requires the "strength lengthwise of the grain [be] retained," the reference teaches away from intersecting kerfs.

Thus, the reference fails to disclose a plurality of slits formed longitudinally in the mediate board in spaced latitudinal relation to intersect the plurality of latitudinal slits on at least the one side face, as now defined in Claim 1. Further, the reference fails to disclose a plurality of spaced inclined slits formed in the at least one side face and respectively intersecting each one of the plurality of latitudinal slits on the at least one side face, as now defined in Claim 8. Still further, the reference fails to disclose a plurality of left slanted slits formed in the top face of the mediate board and intersecting the plurality of top slits, and a plurality of right slanted slits formed in the bottom face of the mediate board and intersecting the plurality of bottom slits, as now defined in Claim 9. Therefore, as the reference fails to disclose each and every one of the elements of Claims 1, 8 and 9, it cannot anticipate those claims. Still further, as the reference fails to suggest such a combination of elements, and in fact teaches away from such a combination, it cannot make obvious that invention either.

It is respectfully submitted that the Bryant reference is directed to a composite wooden panel, and fails to overcome the deficiencies of Weyerhaeuser. The Bryant reference discloses laminated structure wherein the central core 12 may be sandwiched between multiple outer layers on opposing sides thereof, and having cross grain arrangement of layers. However, the reference fails to disclose or suggest any formation of intersecting slits on one or more side faces of the central core, as claimed. Therefore, as the Bryant reference fails to disclose each and every one of the claimed elements, it cannot anticipate the invention of the subject Patent Application, as now claimed. Further, as the reference fails to suggest such a combination of elements, the combination of Bryant and Weyerhaeuser cannot make obvious the invention of the subject Patent Application either.

For all the foregoing reasons, it is now believed that the subject Patent Application has been placed in condition for allowance, and such action is respectfully requested.

Respectfully submitted,
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